

**STATE OF HAWAI'I DEPARTMENT OF HEALTH
NOTICE AND FINDING OF VIOLATION**

TO: Oceanic Institute 41-202 Kalaniana'ole Highway Waimanalo, Hawaii 96795 Respondent	NFVO No. 2003-CW-EO-03 <i>Use this NFVO number on all correspondence</i> RE: Aquaculture pond overflow to the Pacific Ocean Property/Facility: Oceanic Institute ("OI") Address: 41-202 Kalaniana'ole Highway (TMK: 4-1-014-011)
--	--

Under Hawaii Revised Statutes ("HRS"), Chapters 91 and 342D, and Hawaii Administrative Rules ("HAR"), Chapter 11-55, the Department of Health ("DOH") issues this Notice and Finding of Violation and Order ("NFVO"). This case deals only with violations alleged below. DOH reserves the right to impose penalties for past violations, to modify this order, and to impose further orders. DOH may bring other cases for other violations and violations of this order. This case does not limit cases by any other public agency or private party.

Statutes/Rules	Nature of the Violation
HRS, § 342D-50(a),(d) HAR, §11-55-03	On March 31, 2003, the DOH determined that the OI discharged aquaculture pond overflow sea water to the Pacific Ocean at Makapuu Point. The discharged water contains aquaculture marine life wastes and continues to the present.

The facts of this case and the law justify the following order.

ORDER

You are ordered to:

1. Meet the Compliance Schedule (see Attachment A) and construct and operate a dispersion well field on your property, and properly dispose of all OI overflow sea water into the wells by September 30, 2004. This schedule provides for time to conduct the study, apply for and receive the applicable permits, design, award the contracts and construct both the well field and the collection, settling and dispersal system.
2. Comply with the Water Quality and Effluent Requirements and Monitoring Program provided by the DOH (see Attachment B).
3. Pay a penalty of \$100.00 per day for each day the final compliance deadline in Attachment A is not met.
4. Within two (2) weeks of the date of this Order, post and maintain a sign(s) at or near the effluent from the highway culvert informing the public that the flow from the culvert is from aquaculture ponds. The sign(s) should also provide an Oceanic Institute phone number to call for information. The sign(s), location where sign(s) will be posted, and the number of sign(s) to be posted shall be subject to DOH review.
5. Send all correspondence to the DOH addressed to: Director of Health, State Department of Health, Environmental Management Division, Clean Water Branch, 919 Ala Moana Blvd., Room 301, Honolulu, HI 96814-4920, Attn: Mr. Denis R. Lau.

This NFVO becomes final and enforceable 20 days after your receipt, unless before the 20 days end, Clean Water Branch ("CWB"), DOH, receives a written request for hearing at the above address. At a hearing, you may seek to avoid any penalty, and DOH may seek the maximum penalty of Twenty-five Thousand Dollars (\$25,000) per day, per violation, although the actual penalty amount may be lower, or none. Any actual penalty will ultimately be decided by the Director of Health. Any hearing will follow HRS, Chapter 91, 342D, and the DOH Rules of Practice and Procedure. If you have questions, call Mr. Michael Tsuji, Supervisor of the Enforcement Section, CWB, at (808) 586-4309.

If due to disability or language, you have special needs for responding to this NFVO or for participating in any hearing, call Mr. Michael Tsuji, Supervisor of the Enforcement Section, CWB, at 586-4309 (voice) or via the telecommunications relay service at 1-711.

_____ Laurence K. Lau, Deputy Director of Health Date: _____	Approved as to form: _____ Deputy Attorney General
--	---

ATTACHMENT A

COMPLIANCE SCHEDULE

for

PERMITTING, CONSTRUCTION, AND FINAL APPROVAL OF

FOUR SALT WATER DISPOSAL WELLS AT

THE OCEANIC INSTITUTE

Part A. SCHEDULE

Activity	Entity Responsible	Due Date
Submit a complete and satisfactory UIC application to construct four (4) new injection wells for sea water operations disposal.	Oceanic Institute	October 15, 2003
Review and comment on the UIC application by other entities (i.e., agencies and affected businesses), e.g., CWB, DLNR, DOA, EPA, and Sea Life Park	Others	November 30, 2003
Resolve comments by entities, if any, and issue Approval To Construct, i.e., the approval to construct and test the four (4) injection wells.	DOH	December 31, 2003
Prepare well construction specifications and hire the driller.	Oceanic Institute	February 28, 2004
Construct and test the injection wells. Obtain, evaluate, and formally report (final engineering/geological report) the injection test results, boring logs, and all other required information regarding the nature and operation of the injection well, including any DOH-imposed conditions/requirements, for addressing environmentally-related concerns.	Oceanic Institute	June 30, 2004
Review/evaluate the final report. Resolve any issues related to the findings and conclusions of the final report.	DOH & Others	August 31, 2004
Issue the UIC permit to operate the four (4) injection wells.	DOH	September 30, 2004
Begin full time operation of the four (4) injection wells.	Oceanic Institute	September 30, 2004

Part B. DELAYS OR IMPEDIMENTS TO COMPLIANCE:

1. If any event occurs or situation arises which causes or may cause delays in the achievement of compliance at Respondent's facilities as provided in this Order, Respondent shall notify the DOH orally as soon as feasible and in writing ten (10) days before an anticipated delay, if possible, and within ten (10) days of an unanticipated delay. The notice shall describe in detail the anticipated length of the delay, the precise cause or causes of the delay, the measures taken and to be taken by

the Respondent to prevent or minimize the delay, the timetable by which those measures will be implemented, and the expected effect on the environment due to the delay.

2. The Respondent shall adopt all reasonable measures to avoid or minimize any such delay.
3. Failure of the Respondent to comply with the notice requirements of paragraph #1 shall render this part void and of no effect as to the particular incident involved and shall constitute a waiver of the Respondent's right to request an extension of its obligations under this Order based on this particular incident.
4. If the DOH finds that the delay or anticipated delay in compliance with this Order has been or will be caused by circumstances entirely beyond the control of the Respondent, the time for performance hereunder may be extended for a period no longer than the delay resulting from such circumstances.
5. The burden of proving that any delay is caused by circumstances entirely beyond the control of the Respondent shall rest with the Respondent, within ten (10) days before an anticipated delay, if possible, and within ten (10) days of an unanticipated delay.
6. Increased costs associated with the implementation of actions called for by this Order and financial limitations shall not, in any event, be a basis for changes in this Order or extensions of time under the preceding subparagraph.
7. Delay in the achievement of one interim step shall not necessarily justify or excuse delay in achievement of subsequent steps.

ATTACHMENT B

**WATER QUALITY AND EFFLUENT REQUIREMENTS
AND MONITORING PROGRAM**

During the period from the date of this Order until discharges of aquaculture-related effluent into the Pacific Ocean cease, the Respondent shall comply with the following conditions.

A. General Requirements

1. The Respondent shall not cause or contribute to a violation of the narrative basic water quality criteria specified in Section 11-54-04(a) which states:

“(a) All waters shall be free of substances attributable to domestic, industrial, or other controllable sources of pollutants, including:
 - (1) Materials that will settle to form objectionable sludge or bottom deposits;
 - (2) Floating debris, oil, grease, scum, or other floating materials;
 - (3) Substances in amounts sufficient to produce taste in the water or detectable off-flavor in the flesh of fish, or in amounts sufficient to produce objectionable color, turbidity, or other conditions in the receiving waters;
 - (4) High or low temperatures; biocides; pathogenic organisms; toxic, radioactive, corrosive, or other deleterious substances at levels or in combinations sufficient to be toxic or harmful to human, animal, plant, or aquatic life, or in amounts sufficient to interfere with any beneficial use of the water;
 - (5) Substances or conditions or combinations thereof in concentrations which produce undesirable aquatic life;
 - (6) Soil particles resulting from erosion on land involved in earthwork, such as the construction of public works; highways; subdivisions; recreational, commercial, or industrial developments; or the cultivation and management of agricultural lands.”
2. The Respondent shall not cause or contribute to a violation of the basic numeric water quality requirements of Hawaii Administrative Rules (HAR), Section 11-54-04(b).
3. The Respondent shall not discharge any type of medicine, chemical or additive used at the facility to the ocean.
4. The Respondent shall not discharge sanitary wastewater, filter backwash water, washwater, or disinfection (e.g. chlorinated) water to the ocean.
5. The Respondent shall ensure that the oxidation pond, to the maximum extent practicable, does not contain any aquatic animals, including, but not limited to, fish and shrimp. The Respondent shall manually remove aquatic animals as necessary. The Respondent shall not use chemicals to eradicate aquatic animals.

B. Monitoring Requirements

1. The Respondent shall take water samples at the locations described below:
 - a. Intake well.
 - b. Oxidation pond overflow weir.
 - c. Culvert fronting facility, mauka (south) of Kalanianaʻole Highway.
 - d. Shoreline - fronting the culvert outfall.
 - e. Shoreline - 20 yards east of the culvert outfall.
 - f. Shoreline - 20 yards west of the culvert outfall.
 - g. Shoreline - fronting the dirt parking lot, approximately 120 yards east of the culvert outfall.
2. The Respondent shall analyze the samples for the parameters listed in the table below:

Parameter	Monitoring Frequency	Type of Sample	Minimum Detection Limit	Unit
Flow	Once/Day ¹	Recorder/Totalizer	---	MGD
Dissolved Oxygen	Once/Month ²	Grab ³	---	% Saturation
Temperature	Once/Month ²	Grab ³	---	°C
Salinity	Once/Month ²	Grab ³	---	ppt
pH Range	Once/Month ²	Grab ³	---	Standard Unit
Total Nitrogen	Once/Month ²	Grab ³	10	µg/l
Ammonia Nitrogen	Once/Month ²	Grab ³	10	µg/l
Nitrate + Nitrite Nitrogen	Once/Month ²	Grab ³	10	µg/l
Total Phosphorus	Once/Month ²	Grab ³	5	µg/l
Turbidity	Once/Month ²	Grab ³	1	NTU
Enterococcus ⁴	Once/Month ²	Grab ³	1	#cfu/100 ml

Parameter	Monitoring Frequency	Type of Sample	Minimum Detection Limit	Unit
Clostridium Perfringens ⁴	Once/Month ²	Grab ³	1	#cfu/100 ml

MGD Million gallons per day

µg/l Micrograms per liter

NTU Nephelometric Turbidity Units

#cfu Number of colony forming units

ml Mililiter

¹ Once/Day means that the total discharge flow each calendar day shall be calculated/estimated.

² Once/Month means once per calendar month.

³ Grab sample means an individual sample collected at a randomly-selected time over a period not exceeding 15 minutes.

⁴ The Respondent shall report a running geometric mean of five (5) consecutive monitoring results.

3. The Respondent shall conduct all water sampling on the same day.
4. The Respondent shall conduct monitoring in accordance with test procedures approved under Title 40 Code of Federal Regulations (40 CFR) Part 136, effective July 1, 1998, and, when applicable, the chemical methodology for sea water analyses (see HAR, Section 11-54-10). The detection limit of the test methods used shall be equal to or lower than the applicable detection limit specified in Part B.2.
5. For situations where the applicable detection limit specified in Part B.2 is below the detection limit of the available test methods, the Respondent shall use the test method which has the detection limit closest to the detection limit specified in Part B.2. If a test method has not been promulgated for a particular parameter, the Respondent may submit an application in accordance 40 CFR Part Section 136.4 through the Director for approval of an alternate test procedure.
6. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. The burden of proving that sampling or monitoring is representative shall be on the Respondent. A representative sample means that the content of the sample shall:
 - a. Be identical to the content of the substance sampled at the time of the sampling.
 - b. Accurately represent the monitored item (for example, sampling to monitor final effluent quality shall accurately represent that quality, even though the sampling is done upstream of the discharge point).
 - c. Accurately represent the monitored item for the monitored time period (for example, sampling to represent monthly average effluent flows shall be taken at

times and on days that cover significant flow variations). Representative sampling may mean including weekends and storm events and may mean taking more samples than the minimum number specified in this Order.

7. The Respondent shall select and use appropriate flow measurement devices and methods consistent with accepted scientific practices to ensure the accuracy and reliability of measurements of the volume of discharges. The Respondent shall install, calibrate, and maintain the devices to ensure the accuracy of the measurements is consistent with the accepted capability of that type of device. The Respondent shall select a device capable of measuring flows with a maximum deviation of less than $\pm 10\%$ from the true discharge rates throughout the range of expected discharge volumes. Guidance in selection, installation, calibration, and operation of acceptable flow measurement devices can be obtained from the following references:
 - a. "A Guide of Methods and Standards for the Measurement of Water Flow," U.S. Department of Commerce, National Bureau of Standards, NBS Special Publication 421, May 1975, 97 pp. (Available from the U.S. Government Printing Office, Washington, D.C. 20402. Order by SD catalog No. C13.10:421.)
 - b. "Water Measurement Manual," U.S. Department of Interior, Bureau of Reclamation, Second Edition, Revised Reprint, 1974, 327 pp. (Available from the U.S. Government Printing Office, Washington, D.C. 20402. Order by catalog No. 127.19/2:W29/2, Stock No. S/N 24003-0027.)
 - c. "Flow Measurement in Open Channels and Closed Conduits," U.S. Department of Commerce, National Bureau of Standards, NBS Special Publication 484, October 1977, 982 pp. (Available in paper copy or microfiche from National Technical Information Service (NTIS), Springfield, VA 22151. Order by NTIS No. PB-273 535/5ST.)
 - d. "NPDES Compliance Flow Measurement Manual," U.S. Environmental Protection Agency, Office of Water Enforcement, Publication MCD-77, September 1981, 135 pp. (Available from the General Services Administration (8BRC), Centralized Mailing Lists Services, Building 41, Denver Federal Center, Denver, CO 80225.)
8. The Respondent shall periodically calibrate and perform maintenance on all monitoring and analytical equipment used to monitor the pollutants discharged under this Order, at intervals which will insure the accuracy of measurements, but no less than the manufacturer's recommended intervals or six (6) month intervals, whichever interval is shorter. The Respondent shall retain records of calibration in accordance with Part B.11.
9. Any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained in this Order may, upon conviction, be subject to a penalty of not more than \$10,000 per violation, or by

- imprisonment for not more than two (2) years per violation, or by both for a first conviction. For a second and subsequent conviction, the person is subject to a fine of not more than \$20,000 per day of violation, or imprisonment for not more than four (4) years, or both. (Updated under the Water Quality Act of 1987)
10. Any records of monitoring activities and results shall include the following information for all samples:
 - (a) Date, exact place, and time of sampling or measurements.
 - (b) Individual(s) who performed the sampling or measurements.
 - (c) Date(s) analyses were performed.
 - (d) Individual(s) who performed the analyses.
 - (e) Analytical techniques or methods used.
 - (f) Results of the analyses.
 11. The Respondent shall retain for a minimum of five (5) years any records of monitoring activities and results including all original strip chart recording for continuous monitoring instrumentation and calibration and maintenance records. This period of retention shall be extended during the course of any unresolved litigation or administrative enforcement action regarding the discharge of pollutants by the Respondent or when requested by the Director.
 12. The Respondent shall submit a Monitoring Program as described in Part F.

C. Whole Effluent Toxicity Limitations and Monitoring Requirements

The Respondent shall conduct chronic toxicity tests once per calendar quarter on flow-weighted 24-hour composite effluent samples in accordance with the procedures outlined below.

1. Limitation

The No Observed Effect Concentration (NOEC) shall be 1.0 TU_C.

2. Test Species and Method

The Respondent shall conduct chronic toxicity testing on *trypneustes gratilla* using Hawaiian Collector Urchin, *Trypneustes Gratilla* (Hawa'e) Fertilization Test Method (Adapted by Amy Wagner, EPA Region 9 Laboratory, Richmond, CA from a method developed by George Morrison, EPA, ORD Narragansett, RI and Diane Nacci, Science Applications International Corporation, ORD Narragansett, RI)..

3. Exceptions

- a. If the Respondent experiences difficulty in obtaining gametes or has unacceptable control performance while conducting the sea urchin sperm/fertilization bioassay during a monitoring period, the Respondent shall document its efforts, communicate all attempts to the Director, and report all attempts on the discharge monitoring report for that monitoring period.
 - b. It shall not be a violation of this Order if it can be proven to the Director's satisfaction that the inability to perform the tests as described above was due to circumstances beyond the Respondent's control.
4. The Respondent shall submit a whole effluent toxicity monitoring program as described in Part F.

D. Bottom Biological Communities Monitoring Requirements

1. The Respondent shall monitor the diversity and distribution of the bottom biological communities of the receiving water at least once during the first six (6) months of each calendar year (January 1st - June 30th) and once during the second six (6) months of each calendar year (July 1st - December 31st).
2. The Respondent shall submit a report summarizing the bottom biological communities monitoring performed by July 28th of the same year for monitoring performed during the first six (6) months of the calendar year and by January 28th of the following year for monitoring performed during the second six (6) months of the calendar year.
3. The Respondent shall develop and implement a program researching reasonable alternatives to the current methods of treatment or control if deemed prudent by the Director.
4. The Respondent shall submit a Bottom Biological Communities Monitoring Program as described in Part F.

E. Reporting Requirements

1. General Reporting Requirements
 - a. The Respondent shall include the Docket Number of this Order **(2003-CW-EO-03)** with each submittal.
 - b. The Respondent shall certify each submittal required under this Order in accordance with 40 Code of Federal Regulations Section 122.22 and with the following statement:

“I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations .”

- c. The Respondent shall submit all monitoring results required by this Order to the Director at the following address:

Director of Health
State Department of Health
Environmental Management Division
Clean Water Branch
919 Ala Moana Boulevard, Room 301
Honolulu, HI 96814-4920

2. Monitoring Results

- a. The Respondent shall summarize and report monitoring results on the form provided unless otherwise instructed by the Director.
- b. The Respondent shall submit (or postmark) monitoring results by the 28th day of the month following the completed monitoring period.

3. Chemical Usage Inventory

The Respondent shall submit a monthly chemical usage inventory listing the chemicals used at the facility by the 28th day of the month following the completed month. The chemical usage inventory shall include the following information for each chemical listed:

- a. Name of chemical, including trade names.
- b. Quantity used.
- c. Reason for use.
- d. Method of use (e.g. added to fish tanks).
- e. Location of use (e.g. Doherty Laboratory, 2nd Floor).

- f. Disposal methods (e.g. disposed into Dispersion Well #1) of all substances containing chemicals, including, but not limited to tank water and fish excrement.
- 4. Bottom Biological Communities Monitoring Results

The Respondent shall submit the reports summarizing the bottom biological communities monitoring conducted in accordance with Part D by July 28th of the same year for monitoring performed during the first six (6) months of the calendar year and by January 28th of the following year for monitoring performed during the second six (6) months of the calendar year.
- 5. Noncompliance
 - a. Oral Reports

The Respondent shall orally notify the Clean Water Branch during regular business hours which are Monday through Friday (excluding holidays) from 7:45 a.m. until 4:15 p.m. at 586-4309 and by facsimile during nonbusiness hours at 586-4352 **within 24 hours** when the following occurs:

 - (1) Any noncompliance which may endanger human health or the environment.
 - (2) Any bypass or upset resulting in or contributing to a discharge to State waters.
 - (3) Any discharge not authorized by this Order.
 - b. Written Reports
 - (1) The Respondent shall submit a written noncompliance report within five (5) days of the time the Respondent becomes aware of the noncompliance. The report shall be submitted to the Director at the address listed in Part E.1.
 - (2) The report shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the amount of time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.
 - (3) The Director may waive the written report or the five (5) day deadline on a case-by-case basis if the information described in Part E.5.a was received by the Clean Water Branch within 24 hours of the noncompliance.

6. Other Circumstances

- a. The Respondent shall **immediately report** any changes that may have adverse effects on the receiving waters from the normal conditions.
- b. The Respondent shall report to the Director any observation of unusual occurrences or conditions at the facility or surrounding areas which may cause an environmental impact. "Unusual occurrences or conditions" shall include, but not be limited to, fish kills and presence of algal blooms.

F. Other Requirements

1. Schedule of Submission

a. Monitoring Program

The Respondent shall submit a Monitoring Program which complies with Part B to the Director for approval within 20 days from the effective date of this Order. The Program shall include at a minimum, but not be limited to the following:

- (1) Sampling location map.
 - (2) Sample holding time.
 - (3) Preservation techniques.
 - (4) Test method and method detection level.
 - (5) Quality control measures.
- b. The Respondent shall submit a whole effluent toxicity monitoring program which complies with Part C to the Director for approval within 30 days from the effective date of this Order.
 - c. The Respondent shall submit a receiving water bottom biological communities monitoring program which complies with Part D to the Director for approval within 60 days from the effective date of this Order.

2. Schedule of Maintenance

The Respondent shall submit a schedule for approval by the Director at least 14 days prior to any maintenance of facilities, which might affect the quality of the discharge. The schedule shall contain a description of the maintenance and its reason; the period of maintenance, including exact dates and times; and steps taken or planned to reduce, eliminate, and prevent occurrence of noncompliance.

3. Duty to Provide Information

The Respondent shall furnish to the Director, within a reasonable time, any information which the Director may request to determine compliance with this Order. The Respondent shall also furnish to the Director, upon request, copies of records required to be kept by this Order.

4. Inspection and Entry

The Respondent shall allow the Director, or a duly authorized agent, upon presentation of credentials and other documents as may be required by law, to:

- a. Enter upon the Respondent's premises where a regulated facility or activity is located or conducted or where records must be kept under the conditions of this Order.
- b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Order.
- c. Inspect, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order.
- d. Sample or monitor, at reasonable times, for the purpose of assuring compliance with this Order, any substances or parameters at any location.

5. Reopener

The Director reserves the right, based on monitoring results or other relevant information and as appropriate, to require the Respondent to increase or decrease monitoring, including revising the approved monitoring programs, and to change, add, or remove signs, to promote compliance with water quality standards and public health.

Facility Name	OCEANIC INSTITUTE		MONITORING RESULTS
Monitoring Period	Year	Month	

Parameter	Unit	Concentration						
		Intake Well Water	Oxidation Pond Overflows	Culvert - Mauka of Highway	Shoreline Fronting Culvert	Shoreline 20 Yds East of Culvert	Shoreline 20 Yds West of Culvert	Shoreline 120 Yds East of Culvert
Flow	MGD							
Temperature	°C							
Salinity	ppt							
pH	StandardUnit							
Dissolved Oxygen	% Saturation							
Total Nitrogen	µg/l							
Ammonia Nitrogen	µg/l							
Nitrate+Nitrite Nitrogen	µg/l							
Total Phosphorus	µg/l							
Turbidity	µg/l							
Chlorophyl-α	µg/l							
Enterococcus	#/100ml							
Colostridium Perfringens	#/100ml							

Type or Print		I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN; AND BASE ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION, I BELIEVE THE SUBMITTED INFORMATION IS TRUE, ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT. SEE 18 U.S.C. §1001 AND 33 U.S.C. §1319. (Penalties under these statutes may include fines up to \$10,000 and or maximum imprisonment of between 6 months and 5 years.)	Signature of Principal Executive Officer or Authorized Agent
Name of Principal Executive Officer			
Title			